

# **Community Health Needs Assessment:**

## **Health and Behavioral Health Needs**

### **Mills County, Texas**

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**This report is part of a comprehensive project to assess the Health and Behavioral Health Needs of vulnerable populations in a twenty-county region of West Texas. The region covers Coke, Concho, Crockett, Edwards, Irion, Kimble, Kinney, Mason, McCulloch, Menard, Mills, Reagan, Runnels, San Saba, Schleicher, Sterling, Sutton, Tom Green, Upton, and Val Verde counties. The set of project documents includes a report for each county and a comprehensive regional-level assessment.**



**Mills County Courthouse - Goldthwaite, Texas**

**Methodist Healthcare Ministries of South Texas and the San Angelo Health Foundation provided support for this Community Health Needs Assessment for the people of Mills County.**

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## PREFACE

Community Development Initiatives at Angelo State University prepared this Community Health Needs Assessment for the people of Mills County, Texas. The assessment is the product of collaboration among Community Development Initiatives, the Concho Valley Community Action Agency, and many community champions and stakeholders of the twenty-county region covered in the comprehensive study of the Health and Behavioral Health Needs of the Extremely Poor in West Texas.

Community Development Initiatives is based on a belief that flourishing communities thrive on trust between individuals, organizations and institutions. Its mission is to link Angelo State University to West Texas communities through innovative community-based research in support of their development.

The Concho Valley Community Action Agency is a 501(c)3 nonprofit corporation founded in 1966 in response to War on Poverty legislation. Although programs and services have changed over the years, the purpose of fighting the causes of poverty in the Concho Valley has been constant. CVCAA's vision is a community free of barriers to self-sufficiency.

The purpose of the comprehensive study is to identify and prioritize health and behavioral health needs of the approximately 14,743 extremely poor individuals living in a twenty-county region covered by the project. The Mills County Community Health Needs Assessment is a vital part of the regional project.

The research to assess the Health and Behavioral Health Needs of the Extremely Poor in West Texas was guided by a six-member advisory group including:

- Mark Bethune, Concho Valley Community Action Agency
- Tim Davenport-Herbst, St. Paul Presbyterian Church of San Angelo
- Dusty McCoy, West Texas Counseling & Guidance
- Susan McLane, Concho Valley Community Action Agency
- Sue Mims, West Texas Opportunities & Solutions
- Kenneth L. Stewart, Community Development Initiatives

The generous support of Methodist Healthcare Ministries of South Texas and the San Angelo Health Foundation made the comprehensive regional project and this Community Health Needs Assessment for the people of Mills County possible.

## INTRODUCTION

The project to assess Health and Behavioral Health Needs in West Texas employs a collaborative community-based research approach to evaluate the health status and situation of the vulnerable population groups in the study region. By definition, vulnerable populations are the most underserved by the health care system. They include individuals with the least education, low incomes, and members of racial or ethnic minority groups. People living in rural areas such as Mills County are an important segment of the vulnerable populations in health care. The assessment includes the following:



1. A demographic profile featuring the vulnerable groups in the population. The profile integrates publicly available secondary demographic data.
2. A health status profile of community health and mental health care resources, utilization patterns, and morbidity and mortality rates.
3. Results of a survey of poor and extremely poor residents of selected counties in the eastern part of the study region.
4. Identification and prioritization of health and behavioral health issues in Mills County based on the prevalence, consequences, and impact of risk factors on health inequities, and the feasibility of communities acting toward solutions.

## GENERAL DESCRIPTION OF THE MILLS COUNTY COMMUNITY

Mills County is a 734 square mile land area in Central Texas that is partly in the Grand Prairie region and partly in the Western Cross Timbers. Many of the first settlers were German immigrants. The county was established and organized in 1887 with Goldthwaite, Texas as the county seat.



When Mills County was established, agriculture served as the main source of income for the county. Oil was discovered in Mills County in 1982, but oil production ceased in 1990. Presently, the county's economic base includes manufacturing, agriculture, and tourism from hunting and fishing.

Table 1 reports private industry and employment for Mills County in 2013. About 100 private industry establishments employed nearly 822 county residents at an average pay rate of \$28,158. Private industry employees comprised approximately 41 percent of the county's 1,991 person labor force in 2013.<sup>1</sup>

<b>Table 1</b> <b>Mills County Private Industry &amp; Employment, 2013</b>				
North American Industry Classification System (NAICS) Sectors	Annual Average Establishment Count	Annual Average Employment	Percent Total Employment	Average Annual Pay
All private industries	100	822	100	\$28,159
NAICS 11 Agriculture, forestry, fishing and hunting	17	101	12	\$23,026
NAICS 23 Construction	12	33	4	\$23,781
NAICS 31-33 Manufacturing	8	88	11	\$26,504
NAICS 42 Wholesale trade	6	46	6	\$30,087
NAICS 44-45 Retail trade	21	195	24	\$28,046
NAICS 52 Finance and insurance	6	51	6	\$38,811
NAICS 53 Real estate and rental and leasing	3	7	1	\$15,059
NAICS 54 Professional and technical services	8	23	3	\$27,351
NAICS 56 Administrative and waste services	5	17	2	\$29,770
NAICS 62 Health care and social assistance	14	261	32	\$29,236

Source: US Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages, April 1, 2015: <http://www.bls.gov/cew/>

Table 1 illustrates the importance of agriculture, hunting, and fishing (NAICS code 11) in the local economy. About 17 establishments in this sector comprised only the fourth largest employment group with approximately 100 workers in 2013. However, the location quotient

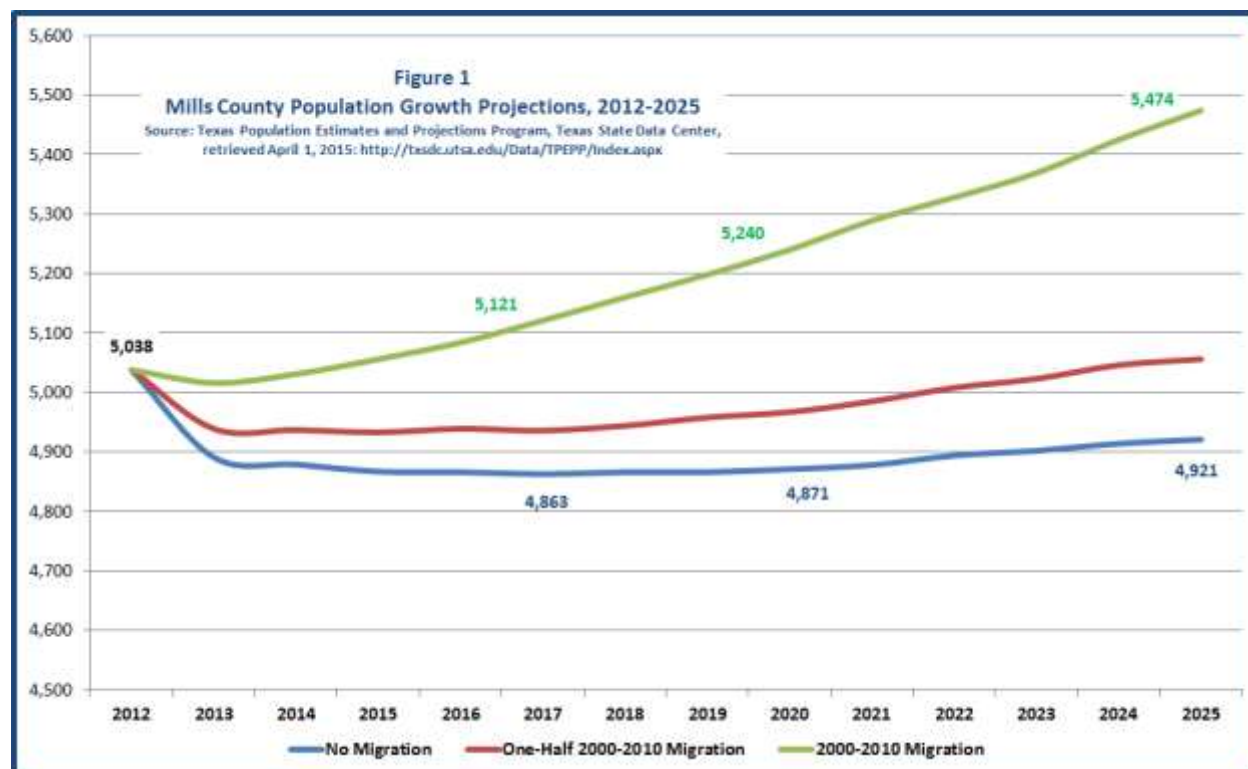
<sup>1</sup> The estimate of 1,991 labor force participants is from the US Census Bureau's 2009-2013 5-Year American Community Survey, retrieved April 1, 2015: <http://factfinder.census.gov>.

for employment in the sector was 11.01, indicating that employment in agriculture, forestry, fishing, and hunting jobs were about 11 times more concentrated than the nationwide level of employment in similar jobs.

While no single employment sector dominated the employment picture in Mills County, health care and social assistance (NAICS code 62) provided the largest source of private employment at 32 percent. Workers in this sector received an annual average pay slightly higher than the average annual pay for all private industry employees.

## DEMOGRAPHICS

The Census Bureau's 2013 estimate of the Mills County resident population is 4,907.<sup>2</sup> The most recent official Texas estimate from the State Demographer is 5,038 for 2012. In addition, the State Demographer developed three population projections based on varying assumptions about migration to and from the county in years ahead. Figure 1 depicts the State's official projections for population growth in Mills County through 2025.



The highest growth projection (green line) is based on the assumption that migration in and out of the county is following the trend set between the decennial census counts in 2000 and 2010. This projection approximates the county will reach 5,121 residents in 2017, 5,240 by 2020, and 5,474 for 2025 (an overall 8.7% gain from 2012-2015).

### Vulnerable Populations

Table 2 below shows the majority (81%) of the residents in Mills County identify as White, Non-Hispanic. The county's 959 Hispanic residents comprised the majority of the minority population in 2012 according to estimates of the State Demographer. Black citizens and other minorities added another 97 residents, bringing the total minority population to 19 percent.

<sup>2</sup> From US Census Bureau, Population Division, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2013, retrieved April 1, 2015: <http://factfinder.census.gov>.

<b>Table 2</b> <b>Race &amp; Ethnicity: 2012 Estimate with Projections to 2025</b>								
Groups	2012		2017		2020		2025	
White, Non-Hispanic	4,079	81%	4,067	79%	4,110	78%	4,224	77%
Total Minority	959	19%	1,054	21%	1,130	22%	1,250	23%
Hispanic	862	17%	959	19%	1,029	20%	1,145	21%
Black	27	1%	25	0%	28	1%	33	1%
Other	70	1%	70	1%	73	1%	72	1%
Total Population	5,038	100%	5,121	100%	5,240	100%	5,474	100%
Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: <a href="http://txsdc.utsa.edu/Data/TPEPP/Index.aspx">http://txsdc.utsa.edu/Data/TPEPP/Index.aspx</a> . The forward projections for 2017, 2020, and 2025 reflect the State Demographer's high-growth assumption that migration will equal the rates of the 2000-2010 time period.								

In addition, the State Demographer's projections indicate that Hispanic residents are likely to account for all of the county's population increase in the near future. The expectation is for the Hispanic segment of the community to steadily grow from 17 to 21 percent between 2012 and 2025 while the Non-Hispanic White population is expected to shrink proportionally.

Children under age 18 (numbering 1,150) made up nearly 23 percent of the county's population in 2012 according to State estimates. Youngsters of school attendance age (5-17 years) comprised 78 percent of the children, while preschoolers accounted for 22 percent.

<b>Table 3</b> <b>Children: 2012 Estimate with Projections to 2025</b>								
Groups	2012		2017		2020		2025	
All Children (under age 18)	1,150	100%	1,206	100%	1,233	100%	1,349	100%
School-age children (ages 5-17)	893	78%	919	76%	912	74%	977	72%
Pre-school-age children (under 5)	257	22%	287	24%	321	26%	372	28%
Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: <a href="http://txsdc.utsa.edu/Data/TPEPP/Index.aspx">http://txsdc.utsa.edu/Data/TPEPP/Index.aspx</a> . The forward projections for 2017, 2020, and 2025 reflect the State Demographer's high-growth assumption that migration will equal the rates of the 2000-2010 time period.								

Projections estimate modest growth in the child population by 2025. Pre-school toddlers are projected to increase from 22 percent of children in 2012 to 28 percent in 2025, accounting for all (or nearly all) growth of the child population by 2025.

According to 2012 State estimates 1,218 senior citizens resided in the county. They comprised 24 percent of the total population. Hispanics (numbering 77) made up only 6 percent of the senior residents in the county. Official State projections suggest brisk growth of the senior population to 27 percent by 2025.



<b>Table 4</b>								
<b>Seniors: 2012 Estimate with Projections to 2025</b>								
<b>Groups</b>	<b>2012</b>		<b>2017</b>		<b>2020</b>		<b>2025</b>	
Total Population	5,038	100%	5,121	100%	5,240	100%	5,474	100%
Seniors (65 & over)	1,218	24%	1,298	25%	1,372	26%	1,461	27%
Hispanic Seniors (65 & over)	77	6%	109	8%	131	10%	157	11%

Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: <http://txsdc.utsa.edu/Data/TPEPP/Index.aspx>.  
The forward projections for 2017, 2020, and 2025 reflect the State Demographer's high-growth assumption that migration will equal the rates of the 2000-2010 time period.

Hispanics, once again, will account for much of the increase. Projections indicate that the numbers of Hispanic seniors will more than double between 2012 and 2025, increasing their representation within the elder population from 6 to 11 percent.

There is a one-to-one ratio of females to males in the Mills County population. Women and girls comprised 50 percent of the population based on the State Demographer's 2012 population estimates. According to projections, the female population will slowly increase in number through 2025, but stay constant as a segment because the male population will grow at the same rate.

<b>Table 5</b>								
<b>Females: 2012 Estimate with Projections to 2025</b>								
<b>Groups</b>	<b>2012</b>		<b>2017</b>		<b>2020</b>		<b>2025</b>	
Total Population	5,038	100%	5,121	100%	5,240	100%	5,474	100%
Female (all ages)	2,538	50%	2,574	50%	2,634	50%	2,736	50%
Female (ages 13-17)	193	8%	182	7%	195	7%	207	8%
Hispanic Female (ages 13-17)	45	23%	28	15%	42	22%	51	25%

Source: Texas Population Estimates and Projections Program, Texas State Data Center, retrieved April 1, 2015: <http://txsdc.utsa.edu/Data/TPEPP/Index.aspx>.  
The forward projections for 2017, 2020, and 2025 reflect the State Demographer's high-growth assumption that migration will equal the rates of the 2000-2010 time period.

Teen pregnancy and a range of associated factors particularly affect girls age 13-17. Estimates suggest the representation of Hispanic females in this age group to initially decline, but to grow from 23 percent to 25 percent by 2025.

## COMMUNITY HEALTH RESOURCES

There is no hospital district located in Mills County. County residents can receive ambulatory care and preventive care from the two rural health clinics located in Goldthwaite.

The rural health clinics are operated and owned by healthcare systems located outside of the county. The Hamilton Hospital District based in the neighboring Hamilton County operates the Family Practice Clinic of Mills County. Coryell Memorial Healthcare System based in the neighboring Coryell County operates the Mills County Medical Center.

### Utilization of Health Resources

The Mills County Medical Center is an outpatient facility staffed by four providers. The clinic offers ambulatory care, digital x-rays, and basic lab tests. There is no direct quality of care data for the Mills County Medical Center; however, the hospital that operates the clinic is one of the hospitals the Centers for Medicare & Medicaid Services (CMS) evaluates through the Hospital Quality Initiative.

The Initiative uses a variety of tools to encourage and support improvements in the quality of care delivered by hospitals by distributing objective, easy to understand data from consumer perspectives. The data are risk-adjusted to reflect characteristics of hospitals and patients. Thus, hospitals are compared to like-hospitals of similar size and patient mix. The Hospital Compare website includes data on more than 4,000 Medicare-certified hospitals across the country.<sup>3</sup>

Coryell Memorial Healthcare System received an above average rating from discharged patients in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. Conducted in partnership with CMS between October 2013 and September 2014,<sup>4</sup> the survey collected responses on patient experiences of the hospital environment as well as communication and responsiveness of doctors, nurses, and staff members. The Healthcare System's 4-star rating indicates that the level of positive patient responses to the hospital is slightly above average compared to similar hospitals.

The Hospital Quality measures of effective care report the percentage of hospital patients receiving the recommended treatments for certain medical conditions or surgical procedures.

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<sup>3</sup> Hospital Compare is available online at <https://www.medicare.gov/hospitalcompare>.

<sup>4</sup> HCAHPS items cover topics such as doctor and nurse communication, hospital cleanliness and noise levels, medication and post-discharge care instructions, and overall patient ratings. Data retrieved October 28, 2015: <https://data.medicare.gov/>.

These include conditions like heart attack, heart failure, pneumonia, children's asthma, stroke, influenza, and blood clots, as well as best practices to prevent surgical complications. Additional measures focus on timely treatment of patients who come to a hospital with medical emergencies.

For the Coryell Memorial Healthcare System, only data for chest pain, heart attack, and pneumonia are available for the data period of October 2013 and September 2014. Generally, Coryell Memorial Healthcare System achieved a low level of adherence to the effective care recommendations compared to similar hospitals in Texas and the nation. Also, the average wait times for the emergency department and receiving recommended care was longer than the state or the nation averages.

The Family Practice Clinic of Mills County is also an outpatient facility. The clinic offers ambulatory care and preventive care. There is no direct quality of care data for the Family Practice Clinic of Mills County; however, the Hamilton General Hospital that operates the clinic is one of the hospitals CMS evaluates using the Hospital Compare tool.

Hamilton General Hospital also received an above average rating from discharged patients in HCAHPS survey. The hospital's 4-star rating indicates that the level of positive patient responses to the hospital is slightly above average compared to similar hospitals.

CMS provides a limited amount of data for the Hamilton General Hospital during the data period of October 2013 and September 2014. Generally, the hospital achieved a good level of adherence to the effective care recommendations compared to similar hospitals in Texas and the nation.

Senior care centers in Mills County include Hillview Manor and Goldthwaite Health & Rehabilitation Center. The facilities provide skilled nursing care to their patients. Both facilities are underutilized compared to other nursing home facilities across Texas. Publicly available 2015 data provided by CMS indicate that the Mills County facilities have a combined certified bed capacity of 146 with approximately 85 inpatients in residence. This computes to a countywide occupancy rate of 58 percent, which compares to a statewide rate of 71 percent for 1,220 Texas nursing homes represented in the CMS 2015 data.<sup>5</sup>

CMS uses a 5-star rating system for nursing home facilities to indicate whether they are average (3 stars), above (4 or 5 stars), or below (1 or 2 stars) compared to similar facilities nationwide.

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<sup>5</sup> Nursing Home Compare Data, Centers for Medicare and Medicaid Services, retrieved August 16, 2015: <https://data.medicare.gov/>.

Star ratings are assigned for the facility's performance on health inspections, staffing, and quality of care, plus an overall facility rating.

Hillview Manor and Goldthwaite Health & Rehab achieved an average rating based on the 2015 CMS data for staffing. Goldthwaite Health & Rehab received an above average rating on quality of care ratings, but Hillview manor was below average. Both facilities received below average overall ratings and for health inspections.<sup>6</sup>

In addition, Texas hospital usage data documents a total of 2,340 visits by Mills County residents to outpatient facilities during 2013. This computes to 1 visit for every 2.2 residents of the county. Residents checked into outpatient facilities located in a number of different Texas cities. According to the Texas Department of State Health Services, a facility Temple and another in Brownwood received over half of the outpatient visits from Mills County residents in 2013.

Mills County residents also made 460 inpatient visits during 2013. This equals 1 hospitalization for every 11 county residents. Similar to outpatient visits, residents checked into inpatient facilities located in a number of different Texas cities with facilities in Temple and Brownwood being utilized the most often.<sup>7</sup>

### **Other Health Care Resources**

The Hamilton Hospital District provides emergency medical services (EMS) to the northern part of Mills County. Hamilton EMS operates five ambulances licensed for basic life support and mobile intensive care unit capabilities.<sup>8</sup>

The Texas EMS & Trauma Registries report that Texas hospitals received 216 trauma patients from Mills County over five years from 2010-2014. This computes to an average of 43 EMS trauma incidents per year. The most common trauma incidents were unintentional fall incidents at 54 percent.<sup>9</sup>

Data for 2014 from the Department of State Health Services counts 17 EMS professionals in Mills County. This yields a population ratio of 290 residents per EMS specialist; a favorable ratio compared to 295 residents per specialist in the study area and 438 for Texas overall.

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<sup>6</sup> See Nursing Home Compare, <https://www.medicare.gov/nursinghomecompare/search.html>.

<sup>7</sup> Texas Department of State Health Services, Inpatient & Outpatient Public Use Data Files, 2013.

<sup>8</sup> Hamilton Healthcare System: <http://www.hamiltonhospital.org/ems/>.

<sup>9</sup> Data provided by the Injury Epidemiology & Surveillance Branch from the Texas EMS & Trauma Registries, Texas Department of State Health Services, June, 2015. Since the data is based on incoming trauma patients to hospitals, the reported incidents may or may not have been handled by EMS services provided in Mills County.

<b>Table 6</b> <b>Selected Health Professionals by Geography, 2014</b>						
Licensed or Certified Professionals	Number in Mills County (4,937 Population)	Ratio of Population per Professional	Number in 20 County Study Region (239,529 Population)	Ratio of Population per Professional	Number in Texas (26,581,256 Population)	Ratio of Population per Professional
Certified Nurse Aides	118	42	1,879	127	124,616	213
Dentists	3	1,646	70	3,422	12,767	2,082
Dieticians	0	No Supply	33	7,258	4,668	5,694
Emergency Medical Services	17	290	812	295	60,690	438
Licensed Chemical Dependency Counselors	2	2,469	87	2,753	9,285	2,863
Licensed Professional Counselors	8	617	158	1,516	20,655	1,287
Licensed Vocational Nurses	24	206	1,197	200	77,624	342
Marriage and Family Therapists	1	4,937	12	19,961	3,149	8,441
Medication Aides	8	617	139	1,723	10,012	2,655
Occupational Therapists	0	No Supply	45	5,323	7,914	3,359
Optometrists	1	4,937	18	13,307	3,272	8,124
Pharmacists	5	987	146	1,641	23,561	1,128
Physical Therapists	2	2,469	109	2,198	13,136	2,024
Physician Assistants	0	No Supply	51	4,697	6,543	4,063
Physicians (Direct Patient Care)	2	2,469	357	671	47,289	562
Primary Care Physicians	2	2,469	168	1,426	19,277	1,379
Psychiatrists	0	No Supply	12	19,961	1,971	13,486
Promotores (Community Health Workers)	0	No Supply	15	15,969	2,032	13,081
Psychologists (All)	0	No Supply	43	5,570	7,382	3,601
Registered Nurses	15	329	1,696	141	206,027	129
Advanced Practice (APRN)	1	4,937	119	2,013	15,194	1,749
Social Workers	6	823	117	2,047	19,536	1,361
<b>Total Selected Health Professionals</b>	<b>215</b>	<b>23</b>	<b>7,283</b>	<b>33</b>	<b>696,600</b>	<b>38</b>
Source: Texas Department of State Health Services, Supply and Distribution Tables for State-Licensed Health Professions in Texas, retrieved May 26, 2015: <a href="http://www.dshs.state.tx.us/chs/hprc/health.shtm">http://www.dshs.state.tx.us/chs/hprc/health.shtm</a> .						

Table 7 depicts the supply of key health professionals in Mills County according to 2014 Department of State Health Services data. The data indicates a good overall supply of health workers. The total of 215 professionals residing in Mills County translates to one health worker per 23 residents. This ratio compares to one worker per 33 residents in the study region and one per 38 Texans statewide.

However, based on population ratios for specific professions, it appears the county is oversupplied with low-level personnel such as certified nurse aides or licensed vocational nurses, while it is undersupplied with advanced practitioners such as physicians, physician assistants, and registered nurses. Mills County joins many rural West Texas areas with no advanced professionals for behavioral health (psychiatrists or psychologists).

## HEALTH STATUS

### Family and Maternal Health

The Census Bureau's 2009-2013 5-Year American Community Survey estimated 1,325 families residing in Mills County over that time. Overall, the basic indicators of family and maternal health in the County are positive.

Our calculations indicated that about 107 (8.1%) of families were single-parent (mostly female-parent) families with one or more children at home. This is a lower number than the 20-county study region or the state overall, as is the estimated percent of women (9.4%) in the county who are currently divorced.

<b>Table 7</b> <b>Mills County Family and Maternal Health Indicators*</b>				
Indicator	Mills County	Study Region	Region 9	Texas
Divorce Rate (Annual Divorces as a Percent of Annual Marriages)	72.8	43.2	No Data	45.0
Percent Women Age 15 & Over who are Currently Divorced	9.4	12.4	No Data	12.2
Single-Parent Families (Percent of All Families)	8.1	13.1	No Data	15.6
Teen Pregnancy Rate (Pregnancies per 1,000 Females Age 13-17)	2.3	25.3	30.5	21.4
Teen Birth Rate (Births to Mothers Age 13-17 per 1,000 Same Age Females)	2.3	23.1	28.1	18.4
Abortion Rate (Abortions as a Percent of Pregnancies among Females Age 15-44)	8.8	9.8	9.0	15.6
Percent Births to Unmarried Mothers (Female Population Age 15-44)	34.2	44.6	45.9	42.3
Child Abuse Rate* (Confirmed Incidents of Abuse per 1,000 Children)	7.0	12.9	13.8	9.5
Intimate Violence Rate (Incidents of Family Violence & Sexual Assault per 1,000 Population)	4.0	9.4	No Data	8.0
<p>* All ratios and percents, except the Child Abuse Rate, cover 2008-2012. The Child Abuse Rate is for 2010-2014.</p> <p>Sources: All calculations of rates and percents were performed by Community Development Initiatives at Angelo State University using data on Divorce, Teen Pregnancy, Teen Birth, and Abortion from Vital Statistics, Texas Department of State Health Services, retrieved June 9, 2015: <a href="http://www.dshs.state.tx.us/">http://www.dshs.state.tx.us/</a>. The Child Abuse Rate was calculated using data from the Annual Data Books, Texas Department of Family and Protective Services, retrieved June 9, 2015: <a href="http://www.dfps.state.tx.us/">http://www.dfps.state.tx.us/</a>. Estimates of Single-Parent Families and Percent Divorced Women were computed using data from the US Census Bureau, American Community Survey 2009-2013 5 Year Data, retrieved June 9, 2015: <a href="http://factfinder.census.gov/">http://factfinder.census.gov/</a>. Intimate Violence Rates were derived from data at Crime in Texas, Texas Department of Public Safety, retrieved June 9, 2010: <a href="http://www.txdps.state.tx.us">http://www.txdps.state.tx.us</a>.</p>				

Rates of teen pregnancy, births to unmarried mothers, and domestic violence are all comparatively low in Mills County.

## Potentially Preventable Hospitalizations

Hospitalizations that would likely not occur if the individual had accessed and cooperated with appropriate outpatient healthcare are termed potentially preventable. The initiative to reduce potentially preventable hospitalizations works to improve health while diminishing the cost of health care.

The Texas Department of State Health Services estimates that potentially preventable hospitalizations for just ten identifiable health conditions generated \$49 billion in hospital charges between 2008 and 2013. Some \$386 million of these charges were incurred by residents of the 20-county study region.

	Reagan County			Study Region			Texas		
Potentially Preventable Hospitalizations	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge	Number	Average Charge	Per Capita Charge
Bacterial Pneumonia	91	\$26,054	\$619	3,572	\$20,816	\$437	280,079	\$36,925	\$530
Dehydration	0	\$0	\$0	936	\$3,222	\$30	91,238	\$21,706	\$101
Urinary Tract Infection	53	\$22,597	\$313	1,916	\$8,880	\$114	204,853	\$25,282	\$265
Angina (without procedures)	0	\$0	\$0	66	\$1,452	\$1	13,743	\$24,987	\$17
Congestive Heart Failure	51	\$26,910	\$359	3,580	\$22,942	\$421	326,337	\$41,191	\$689
Hypertension (High Blood Pressure)	0	\$0	\$0	463	\$1,927	\$8	65,973	\$25,365	\$85
Chronic Obstructive Pulmonary Disease or Older Adult Asthma	70	\$25,890	\$473	2,857	\$15,320	\$264	253,148	\$31,674	\$411
Diabetes Short-term Complications	0	\$0	\$0	466	\$2,952	\$11	63,954	\$26,913	\$88
Diabetes Long-term Complications	0	\$0	\$0	1,285	\$9,768	\$86	134,630	\$46,872	\$323
All Hospitalizations	265	\$25,484	\$1,764	15,141	\$21,483	\$1,371	1,433,955	\$34,178	\$2,512
Total Charges, 2008-2013		\$6,753,291			\$386,127,532			\$49,010,136,451	

Source: Potentially Preventable Hospitalizations, Center for Health Statistics, Texas Department of State Health Services, retrieved June 12, 2015: <http://www.dshs.state.tx.us/ph/>.

Mills County residents experienced 265 hospitalizations for potentially preventable conditions between 2008 and 2013. These incidents stemmed from bacterial pneumonia, COPD, urinary tract infections, and congestive heart failure. Hospital charges amounted to \$6.8 million, the equivalent of \$1,764 per adult resident of the county.

## Leading Causes of Death

The Department of State Health Services recorded 329 deaths from all causes among Mills County residents between 2008 and 2012. This computes to a five-year crude death rate of 65.3 deaths per 1,000 residents based on the 2012 population estimate. This is much higher than the Texas rate of 32 or the study region rate of 45.6 per 1,000 over the same time frame.



<b>Table 9</b> <b>Leading Causes of Death in Mills County, 2008-2012</b>				
<b>Causes of Death</b>	<b>Deaths</b>	<b>Crude Death Rate*</b>	<b>Study Region Rate*</b>	<b>Texas Rate*</b>
Diseases of the Heart (ICD-10 Codes I00-I09, I11, I13, I20-I51)	79	15.7	9.5	7.4
Malignant Neoplasms (ICD-10 Codes C00-C97)	64	12.7	9.6	7.0
Chronic Lower Respiratory Diseases (ICD-10 Codes J40-J47)	25	5.0	2.7	1.7
Accidents (ICD-10 Codes V01-X59, Y85-Y86)	19	3.8	2.0	1.8
Cerebrovascular Diseases (ICD-10 Codes I60-I69)	18	3.6	2.3	1.8
Diabetes Mellitus (ICD-10 Codes E10-E14)	11	2.2	1.5	1.0
Influenza and Pneumonia (ICD-10 Codes J09-J18)	10	2.0	1.0	0.6
Alzheimer's Disease (ICD-10 Code G30)	9	1.8	1.6	1.0
Chronic Liver Disease and Cirrhosis (ICD-10 Codes K70, K73-K74)	8	1.6	0.8	0.6
*All rates in the table express the number of deaths per 1,000 residents based on the estimated population for 2012. They are crude rates, not adjusted for age or other demographic characteristics. Source: Texas Department of State Health Services, retrieved June 23, 2015: <a href="http://www.dshs.state.tx.us/chs/datalist.shtm">http://www.dshs.state.tx.us/chs/datalist.shtm</a> .				

Medical conditions classified as Diseases of the Heart top the list of the leading causes of death in Mills County. The county generally has significantly higher death rates than the study region or state on the nine leading causes depicted in Table 9.



## SURVEY OF THE POOR AND EXTREMELY POOR IN WEST TEXAS

The Census Bureau's 2009-2013 5-Year American Community Survey data approximates that 4,734 residents of Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties in the eastern part of the 20-county study region are living below the federal poverty level. This computes to a poverty rate of 16.3 percent for these five eastern counties combined. Moreover, the Census Bureau data indicates that some 1,664 or 35.1 percent of these residents are extremely poor, living with incomes less than half the poverty level.<sup>10</sup>

Between April and September 2015, Angelo State University's Community Development Initiatives and 72 organizations collaborated to complete detailed interviews with poor and extremely poor residents of the 20 counties in the study region.<sup>11</sup> A total of 597 interviews were completed, including 49 with residents of the six eastern counties in the study region: Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties.<sup>12</sup> Respondents from the eastern counties had self-reported household incomes below the applicable federal poverty level. Approximately 33.3 percent were extremely poor with incomes equal to or below half of the applicable poverty level. They ranged in age from 22 to 80 with an average age of 52.5 years. Females made up 75.4 percent. See Table 10 for a summary of the sample characteristics.

A schedule of questions covering health, behavioral health, and dental health topics was developed for the interviews. The Behavioral Risk Factor Surveillance System (BRFSS) surveys, conducted with adults age 18 and over by state health departments in partnership with the Centers for Disease Control and Prevention, served as the model for questions.<sup>13</sup> Indeed, the three-page questionnaire yielded 31 indicators which closely parallel similar items in the 2013 BRFSS results for Texas.

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<sup>10</sup> The combined rates of poverty and extreme poverty for the six counties were computed by Angelo State University's Community Development Initiatives based on data from the US Census Bureau, American Community Survey, 2009-2013 5-Year Estimates, retrieved October 2, 2015: <http://factfinder.census.gov/>.

<sup>11</sup> Residents were defined as extremely poor for the purposes of the interviews if their self-reported household income was near 50 percent or less of the applicable federal poverty level for 2015. They were deemed to be poor if self-reported household income was near or below the applicable 2015 poverty level. Based on the results of the 2009-2013 five-year combined samples of the Census Bureau's American Community Survey, we estimated that approximately 14,743 extremely poor individuals reside in the 20-county study region. See the US Census Bureau's 2009-2013 5-Year American Community Survey at <http://factfinder.census.gov>.

<sup>12</sup> The number of interviews conducted in the respective counties was proportional to the estimated total of extremely poor population from the American Community Survey. Based on the American Community Survey, for instance, we estimated that 11.3% of extremely poor individuals in the study region resided in the eastern counties of Kimble, McCulloch, Mason, Menard, Mills, and San Saba. Reflecting this, we conducted 69 or 11.6% of the interviews in these counties

<sup>13</sup> BRFSS interviews are conducted by telephone. In contrast, the interviews for this project were conducted by trained community-based interviewers in a face-to-face informal format. Information on Texas participation and results for the BRFSS is at <http://www.dshs.state.tx.us/chs/brfss/default.shtm>.

<b>Table 10</b>		
<b>Sample Characteristics*</b>		
<b>County of Residence</b>		
Kimble	9	13.0%
McCulloch	5	7.2%
Mason	22	31.9%
Menard	10	14.5%
Mills	10	14.5%
San Saba	13	18.8%
<b>Poverty Status</b>		
Severly poor	23	33.3%
Poor	45	65.2%
<b>Gender</b>		
Male	17	24.6%
Female	52	75.4%
<b>Ethnicity</b>		
Not Hispanic	41	59.4%
Hispanic	28	40.6%
<b>Age</b>		
18-29	3	4.3%
30-39	8	11.6%
40-49	18	26.1%
50-64	27	39.1%
65 & Over	13	18.8%
Average Years of Age		52.5
<b>Years of Schooling</b>		
Less than 12	29	42.0%
12 or More	39	56.5%
Average Years of Schooling		11.0
<b>Household Composition</b>		
Single Person	8	11.6%
Single Parent	17	24.6%
Couples with Children**	13	18.8%
Couples without Children**	13	18.8%
Other***	18	26.1%
Average Household Size		2.4
<p>*The sample size in the east counties was 69. Some frequencies and percentages reported do not sum to 69 or 100% because of missing data for selected variables.</p> <p>**Couples may be married couples or unmarried partners.</p> <p>***Other households includes small numbers of respondents living with their parents, grandparents living with grandchildren, persons living with extended relatives, and persons living with roommates.</p>		

The results in Table 11 below apply only to the eastern counties (Kimble, McCulloch, Mason, Menard, Mills, and San Saba) of the study region. The table compares results from the Survey of the Poor and Extremely Poor to BRFSS estimates of health risk among the total adult populations of the east counties and the state overall. The first row of the table, for instance, reports that 35 individuals or 50.7 percent of the 69 survey participants from Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties said they were limited by poor mental, physical, or emotional health conditions. Texas BRFSS results from a similar question<sup>14</sup> asked in 2013 estimate that only 13.2 percent of all adult residents in the five counties share this risk of impairment.

The 20 risk indicators in Table 11 were selected because the Survey of the Poor and Extremely Poor suggests that this vulnerable group has a level of risk on these factors that is at least 10 percent higher than the risk in the total adult population in the eastern counties. Indeed, based on the comparisons to the BRFSS estimates, the vulnerable poor and extremely poor population experiences elevated risks that range from 18 percent higher (for being diagnosed with asthma) to 345 percent higher (for being diagnosed with kidney disease).

Other significant findings from the Survey of the Poor and Extremely Poor add context to some of the elevated risks indicated in Table 11. For instance, the 39.1 percent of poor and extremely poor residents who reported being a current smoker helps explain the elevated risk of COPD diagnosis (as well as other diagnosed diseases) in this vulnerable group.

Also, the 49.3 percent who reported not seeing a doctor because of cost indicates an elevated cost barrier to health care. Additional results from the survey suggest that a cost barrier to care may be more broadly shared among adults in the east counties. For instance, another item from the Survey indicates that 34.8 percent of respondents lack health insurance. This compares to the Census Bureau's 2013 estimate that 36.8 percent of all adults age 18-64 in Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties are uninsured.<sup>15</sup>

The survey findings also indicate that 53.6 percent of the poor and extremely poor reported not seeing a dentist because of cost, 88.4 percent do not have dental insurance; 72.5 percent do not have a regular dentist; 31.9 percent have not had a routine dental checkup within the past five years; and 36.2 percent never had dental cleaning or x-rays.

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<sup>14</sup> The similar item in the BRFSS was a more formal question asking whether respondents were kept from normal activities for five or more days in the past 30 days by poor mental or physical health.

<sup>15</sup> US Census Bureau, Small Area Health Insurance Estimates, retrieved September 29, 2015: <http://www.census.gov/did/www/sahie/>.

<b>Table 11</b> <b>Health Risks of the Poor and Extremely Poor in North Counties with BRFSS Comparisons</b>					
Risk Indicators	Survey Results: East Counties*			BRFSS Risk Comparisons**	
	Sample	Population at Risk	Percent at Risk	East Counties	Texas
Limited by poor physical, mental, or emotional health conditions	69	35	50.7	13.7	11.6
Could not see a doctor because of cost during past 12 months	69	34	49.3	20.1	19.3
Diagnosed high blood pressure	69	31	44.9	37.7	31.2
Diagnosed heart attack (myocardial infarction)	69	10	14.5	6.0	3.9
Diagnosed heart disease	69	11	15.9	7.7	5.7
Diagnosed stroke	69	7	10.1	4.3	2.5
Diagnosed cardiovascular disease	69	9	13.0	10.9	7.2
Diagnosed asthma	69	13	18.8	15.9	12.6
Diagnosed any cancer	69	8	11.6	9.1	9.0
Diagnosed COPD (incl. emphysema, chronic bronchitis)	69	12	17.4	5.4	5.4
Diagnosed arthritis, rheumatoid arthritis, gout, lupus, fibromyalgia	69	37	53.6	25.4	20.7
Diagnosed depression (major, chronic, minor)	69	31	44.9	15.3	16.0
Diagnosed kidney disease	69	7	10.1	2.3	3.1
Diagnosed diabetes	69	18	26.1	14.5	10.9
Morbidly Obese BMI => 35	69	17	24.6	11.3	12.7
Current smoker	69	27	39.1	18.8	15.9
Current smokeless tobacco user				8.1	4.3
Second-hand smoke exposure in home	69	19	28.8	11.0	13.7
Second-hand smoke exposure at work	69	9	19.6	13.4	18.9
Difficult to access fresh fruits & vegetables	69	18	26.1	10.3	7.7
*These columns report the Survey of the Poor & Extremely Poor in West Texas combined results for Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties.					
**These columns include results from the Texas BRFSS conducted by the Texas Department of State Health Services in 2013. The BRFSS estimates reported for the North Counties are risk-adjusted by Community Development Initiatives at Angelo State University to account for the specific demographic characteristics of Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties.					

In addition to the apparent lack of access to preventative dental care, the survey shows other serious obstacles to preventative medicine among poor and extremely poor residents of the east counties. For instance, 63.8 percent said they never had a colon/rectal exam.

Still other survey findings shine additional light on the indication in Table 11 of a 194 percent higher risk of poor and extremely poor adults being diagnosed with depression. Sizeable proportions of respondents also reported always, often or sometimes feeling a fulfilling life is impossible (52.2%); avoiding situations out of nervousness, fear, or anxiety (66.2%); and feeling alone and not having much in common with people (52.9%).

Finally, Table 11 indicates that 26.1 percent of the poor and extremely poor have difficulty accessing grocery stores with fresh fruits and vegetables. This suggests a level of food insecurity that is more than double the BRFSS estimate of 10.3 percent lacking such access in the overall adult population of the eastern counties. It may also be associated with the higher obesity rate depicted in Table 11.

## IDENTIFICATION AND PRIORITIZATION OF HEALTH NEEDS

### Identification of Community Health Needs

The previous sections of this report summarize the findings relating to Mills County from primary and secondary data collected by community-based participants in a comprehensive project to assess the Health and Behavioral Health Needs of vulnerable populations in a 20-county region of West Texas. The following data provide a foundation for identifying pertinent community health needs in Mills County:

- **Demographic Trend Data:** Demographic projections of population growth in Mills County were reviewed. Growth trends for vulnerable population groups were included in the review.
- **Health Care Resources:** Data and information on the supply of health care professionals, and other health care resources were reviewed.
- **Family and Maternal Health:** Indicators of family composition, domestic abuse data, and maternal health were reviewed.
- **Leading Causes of Death:** Data on leading causes of death were used to identify specific diseases associated with higher death rates in Mills County compared to the state.
- **Survey of the Poor and Extremely Poor in West Texas:** Original survey data was reviewed in conjunction with Texas BRFSS data to identify elevated health and behavioral health risks among the poor and extremely poor population of Kimble, McCulloch, Mason, Menard, Mills, and San Saba counties.

It is important to affirm the community-wide and regional focus of this study of the health needs of vulnerable populations in the 20-county study region of West Texas. With this perspective at the forefront, the needs assessment has made every effort to use data to identify needs of community-level importance which, in many instances, can only be addressed through cooperative, collective community action. Analysis of the data from the community level focus leads to the following summary list of identified needs for Mills County:

1. **Needs of seniors.**  
Increase capacity to address health needs of growing numbers of seniors in the population.
2. **Quality of services.**  
Continue to improve the quality of services provided by Mills County rural health clinics and nursing homes.
3. **Shortage of core health professionals.**  
Create a collaborative community effort to recruit and retain one or more health professionals in core shortage areas such as:

- Physicians, Physician Assistants, or Advanced Nurse Practitioners
  - Psychiatrists or Psychologists
4. Access to EMS  
Establish access to quality EMS for all residents of Mills County.
  5. Access to dental care.  
Increase capacity and access to quality dental care, especially by poor and extremely poor residents and households.
  6. Behavioral health capacity and access.  
Increase capacity and access to quality behavioral health resources.
  7. Preventative actions.  
Increase emphasis on preventative actions in treatment, case management, and community outreach and education to reduce prevalence of and mortality from:
    - Heart disease and cerebrovascular diseases
    - Cancer
    - COPD
    - Influenza and pneumonia
    - Complications from diabetes
    - Alzheimer's disease
    - Chronic liver disease and cirrhosis
    - Accidental deaths
    - Urinary tract infections
  8. Preventative outreach to the poor and extremely poor.  
Increase community capacity to reach the poor, extremely poor, and other vulnerable groups with preventative actions to:
    - Reduce obesity
    - Reduce tobacco use
    - Reduce depression
    - Reduce diabetes
    - Reduce kidney disease
    - Reduce heart disease and cerebrovascular diseases
    - Reduce cancer
    - Reduce cost barriers to treatment
    - Improve case management and outreach
    - Provide education to promote healthy living and wellness
  9. Food security.  
Increase access to nutritious foods by poor and extremely poor individuals and households.

#### 10. Investment in community health needs.

Develop a collaborative initiative to increase investment in addressing community health needs through new taxing authorities such as hospital and EMS districts, and/or through additional collaborations with neighboring counties.

### **Prioritization of Community Health Needs**

A prioritization instrument was used to facilitate a priority ranking of the identified health needs. Key informants and stakeholders reviewed the instrument at a series of community forums during October 2015. Invitations were sent to county judges and county officials, mayors and city officials, law enforcement officials, hospital/clinic administrators and key personnel, mental health leaders, dentists, health departments, church leaders, service organization leaders, school administrators and key personnel, chambers of commerce, and significant employers. Two events were held in San Angelo, one in Brady, and one in Del Rio.

Access to preview copies of the previous sections of this report, including the above list of identified needs, were subsequently distributed via e-mail to key informants and stakeholders interested in Mills County. The informants and stakeholders also received an e-mail invitation and link to respond to the online instrument. Key informants and stakeholders responded from November 13 to December 14, 2015.

The prioritization instrument provided an opportunity for key informants and stakeholders to rank the health needs identified by the study for Mills County. Respondents ranked the needs based the specified criteria.

Respondents ranked the identified community health needs on four criteria. A score between 1 and 5 was assigned for each criterion. The four criteria were presented to respondents as follows:

- Prevalence: How many people are potentially affected by the issue, considering how it might change in the next 5 to 10 years?
  - 5 - More than 25% of the community (more than 1 in 4 people)
  - 4 - Between 15% and 25% of the community
  - 3 - Between 10% and 15% of the community
  - 2 - Between 5% and 10% of the community
  - 1 - Less than 5% of the community (less than 1 in 20 people)



- Significance: What are the consequences of not addressing this need?
  - 5 - Extremely High
  - 4 - High
  - 3 - Moderate
  - 2 - Low
  - 1 – Minimal Consequences
  
- Impact: What is the impact of the need on vulnerable populations?
  - 5 - Extremely High
  - 4 - High
  - 3 - Moderate
  - 2 - Low
  - 1 - Minimal Impact
  
- Feasibility: How likely is it that individuals and organizations in the community would take action to address this need?
  - 5 - Extremely High
  - 4 - High
  - 3 - Moderate
  - 2 - Low
  - 1 - Minimal

No responses ranking the identified needs for Mills County were returned.